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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,668	09/19/2005	Satoru Shoshi	Q90317	3756
23373 7590 12/28/2009 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER				
DESAL, ANISH P				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
12/28/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com  
PPROCESSING@SUGHRUE.COM  
USPTO@SUGHRUE.COM

### Office Action Summary

**Application No.**

10/549,668

**Applicant(s)**

SHOSHI, SATORU

**Examiner**

ANISH DESAI

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***DETAILED ACTION***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed on 09/28/09 after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/28/09 has been entered. The support for amendment to claims 1, 8, and 9 is found in the specification as originally filed.
2. In view of applicant's amendment, the 35 USC Section 112-first paragraph rejection to claim 9 and the 35 USC Section 112-second paragraph rejections to claims 1-4 and 6-9 are withdrawn.
3. In view of applicant's arguments and after reviewing the prior art of record as a whole, the 35 USC Section 103(a) rejections based on Barrera (US 5,965,256) in view of Mori (JP 11-189762-English translation provided by the Examiner) are withdrawn, because Barrera does not teach or suggest the difunctional urethane (meth)acrylate as presently claimed. The difunctional urethane (meth)acrylate as presently claimed requires that the urethane and (meth)acrylate are chemically bonded to each other.
4. In view of applicant's amendment, a new 35 USC Section 102 (b) rejection based on Shiyoji (JP 2003-096410-Machine translation provided by applicant) is made.

5. On 09/28/09, Applicant's attorney Mr. Joseph Hsiao submitted a letter requesting interview with the Examiner. The Examiner called Mr. Hsiao on 12/04/09 to schedule an interview; however the Examiner was unable to reach Mr. Hsiao. No arrangements for the interview were made.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claims 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.**

7. Claim 7 requires weight average molecular weight of 8,000 to 14,000. While there is a support in the specification to state that the weight average molecular weight is in the range of 3,000 to 20,000 or 5,000 to 15,000 (see page 5 of the specification), there is no support in the specification to claim that the weight average molecular weight of 8,000 to 14,000. This rejection would be overcome if applicant replaces "8,000 to 14,000" with, for instance, either "3,000 to 20,000" or "5,000 to 15,000".

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**8. Claims 1, 3, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiyoji (JP 2003-096410-Machine translation provided by applicant).**

9. Regarding claims 1 and 8, since these claims recite "an optionally one or more polymerizable compounds", it is submitted that the polymerizable compounds as claimed are not considered being a part of the presently claimed invention.

10. With respect to claims 1 and 8, Shiyoji teaches a pressure-sensitive adhesive sheet for protection of displays (abstract and 0001). The PSA sheet of Shiyoji comprises a plastic film coated with a release layer, wherein an ionizing radiation curable resin is applied on the plastic film, and a layer of adhesive is applied on the curable resin layer (abstract and 0004). Thus, Shiyoji discloses a PSA sheet having a structure of release coated plastic film/curable resin layer/adhesive layer.

11. As a curable resin layer which gets cured using e.g. UV light (0012), Shiyoji discloses same bifunctional urethane (meth)acrylate (e.g. "UF-503LN" trade name

urethane(meth)acrylate see 0011 and 0019-0021 of Shiyoji) which is identical to that utilized in the present invention. Thus, the difunctional urethane (meth)acrylate of Shiyoji would inherently have the weight average molecular weight as that of presently claimed.

12. As to the claim limitation of hard coat layer, it is noted that applicant's claims broadly recite "hard coat layer" without any specific composition of the hard coat layer. Shiyoji's plastic film can be formed of film containing polycarbonate resin (0006). Therefore, the plastic film of Shiyoji is equated to applicant's hard coat layer.

13. With respect to the claims 1 and 8 limitations "wherein the content of the difunctional urethane (meth)acrylate is 80 percent or more by mass" and "95 percent or more by mass", it is submitted that since the presence of "polymerizable compounds" is optional in the presently claimed invention, based on the mass of the difunctional urethane (meth)acrylate alone, the disclosure of Shiyoji's relating to the urethane (meth)acrylate (20 to 150 mass parts see 0011) anticipates the content of the difunctional urethane (meth)acrylate as presently claimed. Alternatively, in paragraph 0011, Shiyoji states that there is present in the layer 10-200 (or 20-150) parts polyfunctional (meth)acrylate to 100 parts difunctional urethane (meth)acrylate. Based on this, the calculated amount of difunctional urethane (meth)acrylate is approximately 33% (100 parts difunctional urethane methacrylate/(100 parts difunctional urethane

methacrylate + 150 parts polyfunctional (meth)acrylate)) to 90% (100/110) difunctional urethane (meth)acrylate in the layer.

14. Regarding claim 3, the thickness of Shiyoji's plastic film (hard coat layer) is 10 to 300 micrometers (see 0006) and the thickness of the urethane (meth)acrylate layer is from 3-30 micrometers and preferably 5 to 20 micrometers (see 0011). Accordingly, Shiyoji anticipates the presently claimed invention.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. **Claims 1, 3, 4, and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoru (JP 2003-096410-Machine translation provided by applicant) in view of Onozawa et al. (US 6,103,370).**

17. With respect to claims 1 and 8, since these claims recite "an optionally one or more polymerizable compounds", it is submitted that the polymerizable compounds as claimed are not considered being a part of the presently claimed invention.

18. With respect to claims 1 and 8, Shiyoji teaches a pressure-sensitive adhesive sheet for protection of displays (abstract and 0001). The PSA sheet of Shiyoji comprises a plastic film coated with a release layer, wherein a resin layer curable with ionizing radiation is applied onto the plastic film, and a layer of adhesive is applied onto the curable resin layer (abstract and 0004). Thus, Shiyoji discloses a PSA sheet having a structure of release coated plastic film/curable resin layer/adhesive layer.

19. As a curable resin layer which gets cured using e.g. UV light (0012), Shiyoji discloses same bifunctional urethane (meth)acrylate (e.g. "UF-503LN" trade name urethane(meth)acrylate see 0011 and 0019-0021 of Shiyoji) as that of disclosed by applicant in the present invention. Thus, the difunctional urethane (meth)acrylate of Shiyoji would inherently have weight average molecular weight as that of presently claimed.

20. With respect to the claims 1 and 8 limitations "wherein the content of the difunctional urethane (meth)acrylate is 80 percent or more by mass" and "95 percent of more by mass", it is submitted that since the presence of "polymerizable compounds" is optional in the presently claimed invention, based on the mass of the difunctional urethane (meth)acrylate alone, the disclosure of Shiyoji's relating to the urethane (meth)acrylate (20 to 150 mass parts see 0011) reads on the content of the difunctional urethane (meth)acrylate as presently claimed. Alternatively, in paragraph 0011, Shiyoji states that there is present in the layer 10-200 (or 20-150) parts polyfunctional (meth)acrylate to 100 parts difunctional urethane (meth)acrylate. Based on this, the

calculated amount of difunctional urethane (meth)acrylate is approximately 40% (100 parts difunctional urethane methacrylate/(100 parts difunctional urethane methacrylate + 150 parts polyfunctional (meth)acrylate)) to 90% (100/110) difunctional urethane (meth)acrylate in the layer. Accordingly, Shiyoji anticipates the presently claimed invention.

21. With respect to claim 3, the thickness of the urethane (meth)acrylate layer of Shiyoji is 10  $\mu\text{m}$  (see Example 1 paragraph 0019).

22. With respect to claim 6, the release coated plastic film which is in contact with the cured urethane (meth)acrylate layer of Shiyoji is interpreted to meet claim 6.

23. Shiyoji is silent as to teaching the hard coat layer (claim 1), the thickness of the hard coat layer (claim 3), hard coating layer comprising filler (claim 4), and the composition of the hard coat layer (claim 9).

24. However, Onozawa discloses a hard coat sheet having a base sheet, a hard coat layer provided on the base sheet, and an adhesive layer that is provided on the back of the base material (abstract and column 3 lines 60-65). The hard coat layer of Onozawa comprises radiation curing silicone resin based on 100 parts by weight of multi-functional acrylate (abstract). Further, the thickness of the hard coat layer of Onozawa is 1 to 10  $\mu\text{m}$  (column 3 lines 60-62). Further, Onozawa discloses that the

hard coat of his/her invention includes filler to provide anti-glare properties (column 1 lines 56-59 and column 3 lines 19-28).

25. It is noted that the PSA sheet of Shiyoji is used for surface protection of displays (abstract and 0001). The hard coat of Onozawa has anti-fouling property, anti-glare property, and anti-bacterial property (abstract) which would be desirable in the invention of Shiyoji.

26. Based on the above, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use hard coat layer of Onozawa which reads on claims of the presently claimed invention, and use it in the invention of Shiyoji so as to arrive to the PSA sheet of the presently claimed invention, motivated by the desire to provided anti-fouling property, anti-glare property, and anti-bacterial property to the PSA sheet of Shiyoji.

### ***Response to Arguments***

27. Applicant's arguments filed on 09/28/09 have been fully considered.

28. In response to applicant's arguments with respect to the 35 USC Section 112-first paragraph rejection to claim 7, the Examiner submits following;

29. It is respectfully submitted that the Examiner does not agree with applicant's assertion that the Office has provided no evidence or arguments that there is in fact any distinction, between the recited range (i.e. 8,000-14,000) and the range disclosed in the original specification (i.e. 3,000 to 20,000). It is submitted that the Examiner has clearly provided his rationale as to why the aforementioned claimed range is not supported by the original specification (see paragraph 2 on page 2 and paragraph 5 on page 3 of the Advisory Action mailed on 09/08/09). Specifically, the Examiner submits that while applicant points to the examples for the support, however, while these provide support to recite weight average molecular weight of 8,000 or 14,000 for specific type of urethane (meth)acrylates respectively, this does not provide support to recite the weight average molecular weight of 8,000-14,000 for the broad disclosure of urethane (meth)acrylate as claimed. Accordingly, applicant's arguments are not found persuasive.

### ***Conclusion***

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 9:00AM-5:30PM.

31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

32. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./  
Examiner, Art Unit 1794

/Callie E. Shosho/  
Supervisory Patent Examiner, Art Unit 1794